**REMARKS/ARGUMENTS**

This paper is in response to the Official Action mailed June 16, 2005.

As an initial matter, Applicants note that claims 1, 4 and 30 have been amended, and claims 2, 3 and 49 have been canceled in order to expedite prosecution of the instant application. No new matter is included in these amendments. Thus, entry of the amendment is respectfully requested.

Claims 1-5, 7-32 and 49-50 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,783,336 to Margel ("*Margel*"). The Examiner has previously alleged that *Margel* discloses methods of preparing a coated acrolein type in nanometer sizes comprising mixing an aqueous solution of acrolein with an aqueous dispersion of $Fe_3O_4$ in the presence of an oxidizing agent at pH values above 7 to form magnetic particles of uniform size, and the particles are cross-linked to various bioactive agents such as immunoglobulin or fluorescent dyes for various utilities. While Applicants maintain that the process of *Margel* does not even produce monodispersed nanoparticles coated with magnetic metal oxide, much less teach the claimed method, Applicants have amended claim 1 to include the preferred embodiment of the present invention.

Claim 1 of the present invention is directed to a method for producing nanoparticles by mixing gelatin at a temperature from 50°C to 90°C with iron salts in amount not exceeding chelating capacity of the gelatin, ensuring that iron will be present in two oxidation states by adding an oxidizing agent, maintaining the pH at a value of 7 or more, introducing additional portions of the metal salts, repeated ensuring the presence of iron in two oxidation states, maintaining the pH at a value of 7 or more, and optionally repeating the last steps at

least once in order to obtain particles that consist of two phases, iron-polymer chelate core and iron oxide coating. The particles have no functional groups available. In contrast, the microspheres of *Margel* are produced by mixing acrolein, an ionic surfactant and ferrofluidic material (dispersion of $Fe_3O_4$) and polymerizing with an oxidation agent and a reducing agent present to initiate the polymerization. There is no disclosure whatsoever in *Margel* of mixing gelatin with iron salts, as required by claim 1 of the present invention.

Additionally, although the Examiner alleges that Margel discloses methods of preparing a coated acrolein with an aqueous dispersion of $Fe_3O_4$, Applicants respectfully submit that the method of *Margel* does not produce coated particles. The particles obtained consist of one phase made of iron oxide particles encapsulated in polyacrolein polymer.

For a prior art reference to anticipate a claim, the reference must disclose expressly or inherently each and every element of the claim. *Margel* does not disclose expressly or inherently each and every element of claim 1, for at least the reason that it does not disclose the step of mixing gelatin at a temperature from 50°C to 90°C with iron salts in amount not exceeding chelating capacity of the gelatin. Claim 1 is the base claim for claims 2-3, 5, 7-32 and 50, and therefore contains all of the limitations of claim 1. Thus, *Margel* cannot anticipate claims 1-3, 5, 7-32 or 50. Thus, reconsideration and withdrawal of this rejection is respectfully requested.

Claims 1-5, 7-32 and 49-50 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,133,047 to Elaissari ("*Elaissari*") in view of U.S. Patent No. 5,213,895 to Hirai ("*Hirai*"). *Elaissari* discloses a method for producing particles by polymerizing a core of a first polymer, polymerizing a coat of a positively charged second polymer, adsorbing a negatively charged magnetic material, heating above

the lower critical solubility temperature and polymerizing a second coat of a third polymer to obtain particles consisting of four phases. The four phases are a first polymer core, a second polymer layer, an iron oxide layer and a third polymer layer.

Not one of the steps of claim 1, *i.e.*, providing a gelatin aqueous solution as a soluble polymeric chelating agent and contacting the solution at a temperature from 50°C to 90°C with iron salts in amount not exceeding the binding capacity of the chelating agent, oxidizing the ferrous ions, adjusting the pH to at least 7, adding another portion of metal ions, and optionally repeating the last three steps are disclosed by *Elaissari*. Indeed, the differences between the method of *Elaissari* and the method of claim 1 of the instant application are underscored by the resulting particles. The particles produced by the method of *Elaissari* consist of a non-magnetic core and two outer polymer layers. In contrast, the particles produced by the method of the present invention have a magnetic core and an inorganic coat. Additionally, there is no disclosure in *Elaissari* whatsoever of mixing gelatin with iron salts, as required by claim 1 of the present invention.

Furthermore, there is no teaching, suggestion or motivation to combine the process *Elaissari*, which teaches particles for biochemical application, with the process of *Hirai*, which provides a new catalytic material. Moreover, even if a person skilled in the art had been motivated to combine these references, the claimed invention would not be produced. *Hirai* does not teach any of the steps of claim 1.

*Hirai* discloses a method for producing particles adsorbed on a solid carrier, and the preparation of the particles includes the steps of obtaining colloidal dispersion of metal or metal compounds, adding polyvinylpyrrolidone to provide a protective polymer to the metal or metal compound, and combining the protected particles with silica gel. Indeed, the

only mention of magnetite in Hirai is found in Example 11, which teaches converting iron to magnetite for the purpose of mixing it with the protective polymer. There is no chelating step, there are no changes in the pH or redox potential in the mixture of the polymer and iron, and there is no incremental building of an inorganic outer magnetic layer. Furthermore, Example 11 does not teach contacting ferrous ions with a polymer. Applicants respectfully disagree With the Examiner's contention that Hirai describes the use of nitric acid as an oxidizer; Hirai merely uses nitric acid for a routine treatment of active carbon, without any oxidation.

In light of the foregoing reasons, Applicants respectfully submit that claim 1 is not obvious over *Elaissari* in view of *Hirai*. Since claim 1 is the base claim of the remaining claims at issue, the combination of *Elaissari* and *Hirai* not render claims 1-3, 5, 7-32 or 50 obvious for the reasons stated above. Accordingly, reconsideration and withdrawal of this rejection is respectfully requested.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue.

If, however, for any reason the Examiner does not believe that such action can be taken at this time, it is respectfully requested that he/she telephone applicant's attorney at (908) 654-5000 in order to overcome any additional objections which he might have.

If there are any additional charges in connection with this requested amendment, the Examiner is authorized to charge Deposit Account No. 12-1095 therefor.

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Respectfully submitted,

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